

WHAT IS CLAIMED IS:

- 1 1. A method of identifying an agent that binds to CCX-CKR2 on a cell,
2 the method comprising,
3 contacting a plurality of agents to a CCX-CKR2 polypeptide comprising an
4 extracellular domain at least 95% identical to an extracellular domain of SEQ ID NO:2, or a
5 SDF1 or I-TAC-binding fragment thereof; and
6 selecting an agent that competes with I-TAC or SDF1 for binding to the CCX-
7 CKR2 polypeptide or fragment thereof, thereby identifying an agent that binds to CCX-
8 CKR2 on a cell.
- 1 2. The method of claim 1, wherein the cell is a cancer cell.
- 1 3. The method of claim 1, further comprising testing the selected agent
2 for the ability to bind to, or inhibit growth of, a cell.
- 1 4. The method of claim 3, wherein the cell is a cancer cell.
- 1 5. The method of claim 1, further comprising testing the selected agent
2 for the ability to alter kidney function.
- 1 6. The method of claim 1, further comprising testing the selected agent
2 for the ability to alter brain or neuronal function.
- 1 7. The method of claim 1, further comprising testing the selected agent
2 for the ability to change cell adhesion to endothelial cells.
- 1 8. The method of claim 1, wherein the agent is less than 1,500 daltons.
- 1 9. The method of claim 1, wherein the agent is an antibody.
- 1 10. The method of claim 1, wherein the CCX-CKR2 polypeptide
2 comprises the sequence displayed in SEQ ID NO:2.
- 1 11. A method for determining the presence or absence of a cancer cell, the
2 method comprising,
3 contacting a sample comprising a cell with an agent that specifically binds
4 with SEQ ID NO:2; and

5 detecting binding of the agent to a polypeptide in the sample, wherein binding
6 of the agent to the sample indicates the presence of a cancer cell.

1 12. The method of claim 11, wherein the agent is an antibody.

1 13. The method of claim 11, wherein the agent is less than 1500 daltons.

1 14. The method of claim 11, wherein the polypeptide detected is SEQ ID
2 NO:2

1 15. The method of claim 11, wherein the sample is from a human.

1 16. The method of claim 11, wherein the method is used to diagnose
2 cancer in a human.

1 17. The method of claim 11, wherein the method is used to provide a
2 prognosis of cancer in a human.

1 18. The method of claim 11, wherein the cancer is selected from the group
2 consisting of cervical cancer, breast cancer, lymphoma, glioblastomas, prostate cancer, and
3 leukemia.

1 19. The method of claim 11, wherein the cancer is not Kaposi's sarcoma,
2 multicentric Castleman's disease or AIDS-associated primary effusion lymphoma.

1 20. The method of claim 11, wherein the antibody competes with SDF1
2 and I-TAC for binding to SEQ ID NO:2.

1 21. A method of providing a diagnosis or prognosis of an individual
2 having cancer, the method comprising detecting the presence or absence of expression of a
3 polynucleotide encoding a CCX-CKR2 polypeptide in a cell of an individual, wherein the
4 CCX-CKR2 polypeptide binds I-TAC and/or SDF1 and the CCX-CKR2 polypeptide is at
5 least 95% identical to SEQ ID NO:2, thereby diagnosing a cancer in the individual.

1 22. The method of claim 21, wherein the CCX-CKR2 polypeptide is
2 displayed in SEQ ID NO:2.

1 23. The method of claim 21, wherein the cancer is selected from the group
2 consisting of cervical cancer, breast cancer, lymphoma, glioblastomas, prostate cancer, and
3 leukemia.

1 24. The method of claim 21, wherein the cancer is not Kaposi's sarcoma,
2 multicentric Castleman's disease or AIDS-associated primary effusion lymphoma.

1 25. An antibody that specifically competes with SDF-1 and I-TAC for
2 binding to SEQ ID NO:2.

1 26. The antibody of claim 25, wherein the antibody is a monoclonal
2 antibody.

1 27. The antibody of claim 25, wherein the antibody is a humanized
2 antibody.

1 28. A method comprising,
2 contacting a cell with an agent that specifically binds to SEQ ID NO:2,
3 wherein the agent competes with SDF-1 and I-TAC for binding to a CCX-CKR2 polypeptide,
4 and wherein the cell expresses a CCX-CKR2 polypeptide comprising an extracellular domain
5 at least 95% identical to an extracellular domain of SEQ ID NO:2, thereby binding the agent
6 to the CCX-CKR2 polypeptide on the cell.

1 29. The method of claim 28, wherein the agent is less than 1,500 daltons.

1 30. The method of claim 28, wherein the agent is an antibody.

1 31. The method of claim 28, wherein the CCX-CKR2 polypeptide is as
2 displayed in SEQ ID NO:2.

1 32. The method of claim 28, wherein the agent is identified by a method
2 comprising
3 contacting a plurality of agents to a CCX-CKR2 polypeptide comprising an
4 extracellular domain at least 95% identical to an extracellular domain of SEQ ID NO:2, or a
5 SDF1 or I-TAC-binding fragment thereof; and

6 selecting an agent that competes with I-TAC or SDF-1 for binding to the
7 CCX-CKR2 polypeptide or fragment thereof, thereby identifying an agent that binds to a
8 cancer cell.

1 33. A method of treating cancer in an individual, the method comprising
2 administering to the individual a therapeutically effective amount of an agent that competes
3 with SDF1 and I-TAC for binding to SEQ ID NO:2.

1 34. The method of claim 33, wherein the agent is less than 1,500 daltons.

1 35. The method of claim 33, wherein the agent is an antibody.

1 36. The method of claim 33, wherein the agent is identified by a method
2 comprising
3 contacting a plurality of agents to a CCX-CKR2 polypeptide comprising an
4 extracellular domain at least 95% identical to an extracellular domain of SEQ ID NO:2, or a
5 SDF1 or I-TAC-binding fragment thereof; and
6 selecting an agent that competes with I-TAC or SDF-1 for binding to the
7 CCX-CKR2 polypeptide or fragment thereof, thereby identifying an agent that binds to a
8 cancer cell.

1 37. The method of claim 33, wherein the cancer is selected from the group
2 consisting of cervical cancer, breast cancer, lymphoma, glioblastomas, prostate cancer, and
3 leukemia.

1 38. The method of claim 33, wherein the cancer is not Kaposi's sarcoma,
2 multicentric Castleman's disease or AIDS-associated primary effusion lymphoma.